

## SYNFACTS Highlights in Current Synthetic Organic Chemistry

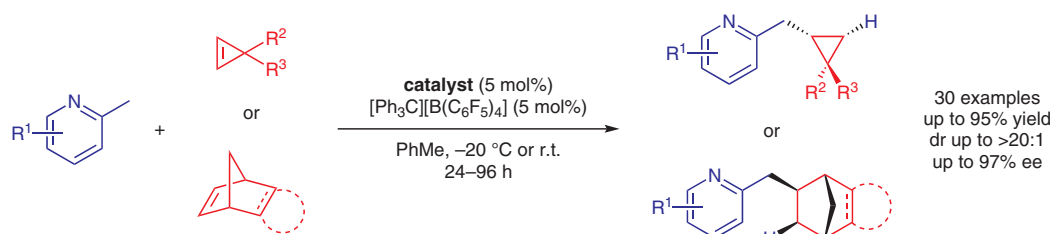
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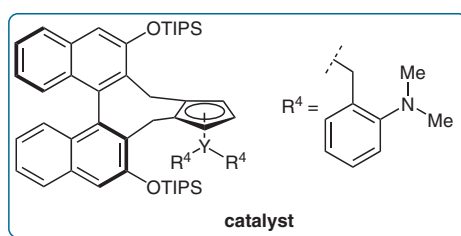
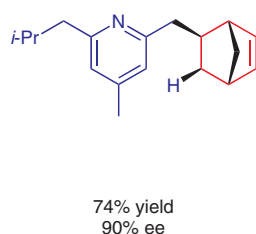
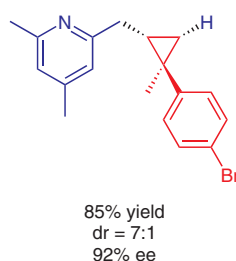
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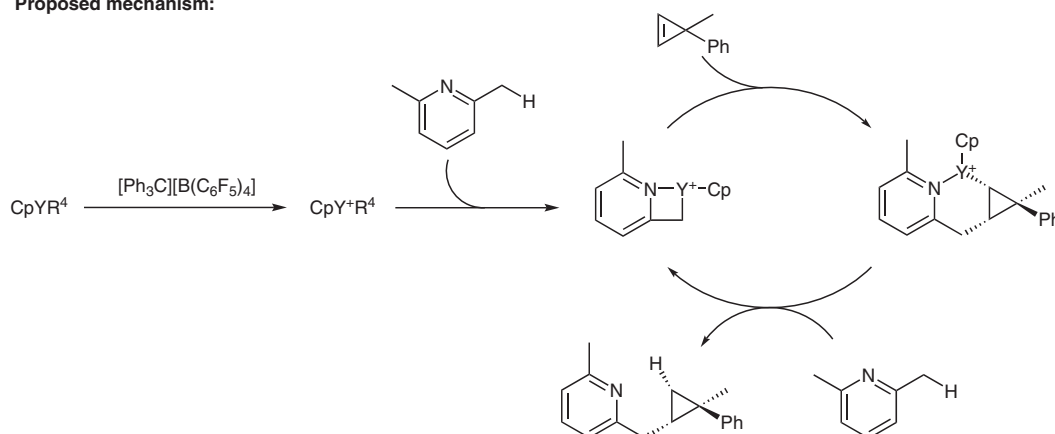
# Yttrium-Catalyzed C(sp<sup>3</sup>)-H Addition to Cyclopropenes



## Selected examples:



## Proposed mechanism:



**Significance:** Hou and co-workers disclosed a novel asymmetric C(sp<sup>3</sup>)-H addition to cyclopropenes and norbornenes. The reaction provides complex cyclopropanes and norbornanes in high yield with good to excellent enantio- and diastereoselectivity.

**Comment:** The proposed mechanism of the transformation involves the activation of an yttrium precatalyst by alkyl abstraction and metal-assisted deprotonation of the substrate. The cycle commences with carbometalation, and subsequent deprotonation of a second substrate completes the catalytic cycle.